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of the
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A CONTRIBUTION

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TO THE

TREATMENT

OF

DISPLACEMENTS OF THE UTERUS

BY

S. J. DONALDSON, M.D.,

New York.

*Reprinted from the AMERICAN JOURNAL OF OBSTETRICS AND DISEASES
OF WOMEN AND CHILDREN, Vol. XVIII., No. 7, 1885.*



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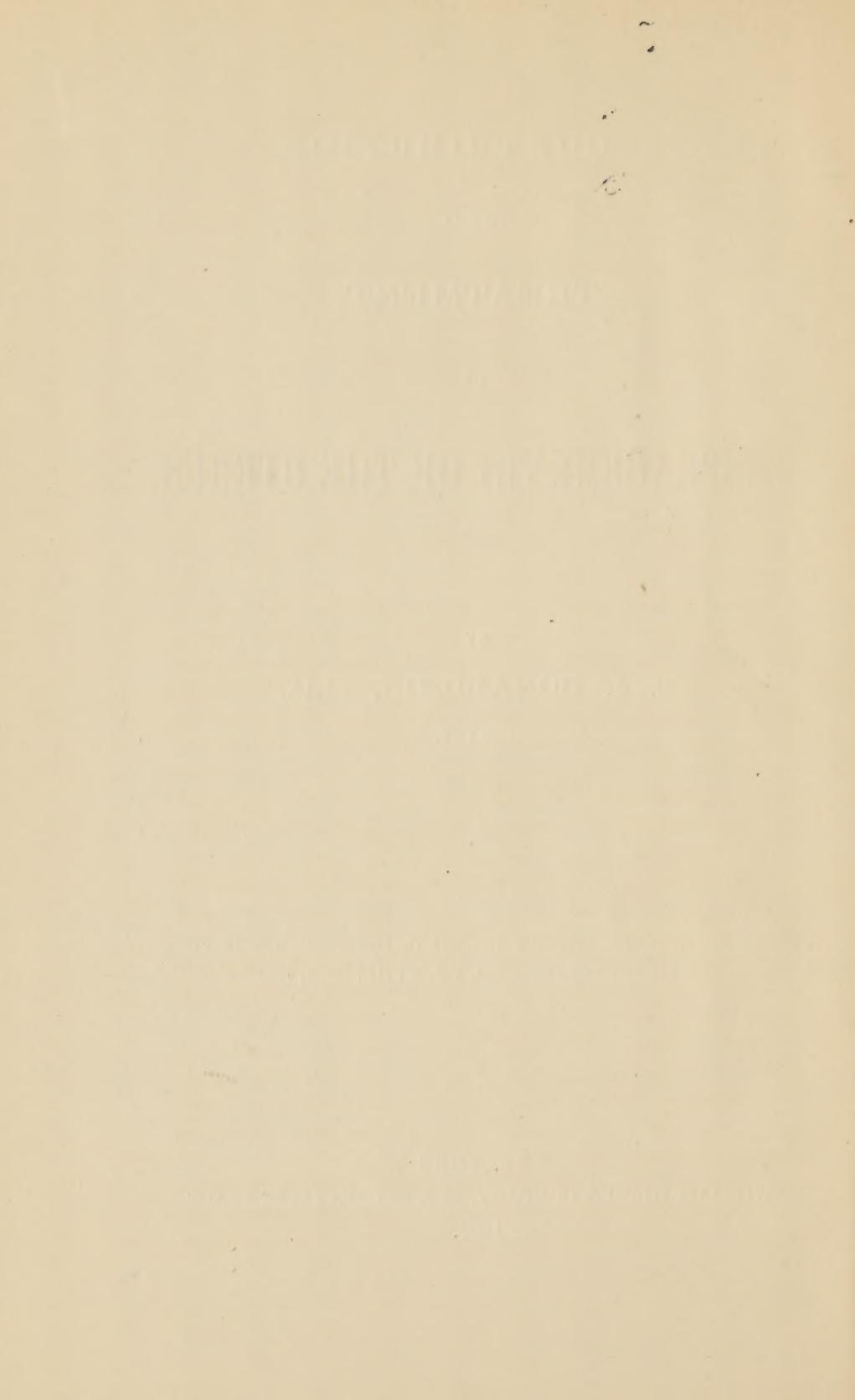
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SINCE the time when prolapsing uteri were first held in position by woolen tents or pouches filled with powdered astringent barks, gynecologists have been sedulous in projecting new forms of pessaries. The vast array of these devices constructed in every conceivable shape and from every available material suggests that physicians have taxed their inventive skill to the utmost to obtain a satisfactory appliance, and also proclaims the unsuccessfulness of their endeavor. Indeed, nothing shows this shortcoming more conclusively than the fact that discriminating practitioners are very generally reverting to the employment of the primitive pessary in the modified form of medicated tampons. It cannot be refuted that there exists just cause for the odium attached to the too prevalent use of mechanical supports, for if the merit of a therapeutic procedure is measured by that which it ultimately achieves, then most assuredly has the use of pessaries proved sadly deficient.

It is the object of this paper to show wherein the want of success attending the practice of popular methods is the legitimate sequence of a persistent following after stereotyped doctrines, regardless of common sense practicalities which lie close to the root of the matter.

The subject before us has been hedged about by an interminable maze of discordant opinions, misleading terms, and plausible but delusive methods; the credence accorded these

unsound teachings being the natural outgrowth of custom and education. It is only after close and extended observations, united with oft-repeated humiliating defeat, that we are enabled to disentangle sound principles from the confusion into which they have been thrown by perverted preconceptions. Every thoughtful physician recognizes, sooner or later, that the chief stumbling block in the way of true advancement is the too implicit reliance placed upon the efficacy of art devices. Let it be clearly understood, however, that it is not my intention to disparage the wise use of intelligently constructed mechanical appliances in the treatment of the very common anomalies under discussion, but I earnestly desire to emphasize the importance of holding the best directed local measures subservient to the more potent influences which are disclosed in the careful tracing of the relation existing between cause and effect. A displacement within the pelvis is too often treated as a disease, *per se*, while the infinitely more important conditions underlying and perpetuating the abnormality are disregarded, and allowed to continue in force. Although lack of space forbids a particularized citation of the manifold causative factors associated with uterine deflexions, a just appreciation of this important matter must be recognized in the premise; for I hold that timely correction of faulty personal habits and other physical perversions, which contribute to malnutrition and habitual derangement of the physiological actions of the pelvic viscera, should always be given precedence over every form of direct or local curative measures. After these remarks it may seem inconsistent to proceed to commend a preferred mechanical device, but I trust the development of the argument will show that the description is introduced more for the sake of illustrating my views regarding the essentials and treatment of pelvic displacements than for the purpose of extolling the merits of any pet device. Moreover, the pessary about to be described cannot really be called an original innovation, since, properly speaking, it is a modification of one already familiar to the profession.

Some years ago, I became completely disheartened over the lack of success attending my treatment of displacements while relying upon the action of the ordinary intravaginal pessary. After careful selection and adjustment of one of these instru-

ments that would reposition the uterus and afford immediate relief to the patient, no true feeling of satisfaction was realized ; for experience had taught me that, be the period of wearing brief or protracted, the displacement would invariably recur upon the removal of the support. Not only was I sure that the abnormality would return, but also that there would be found an additional tissue degeneration incurred through the action of the foreign body. About this period, I commenced using Cutter's loop pessaries, and to their careful manipulation are due my first successes in the treatment of uterine dislocations. As received from the instrument makers, these appliances present a number of objectionable features calling for material modification which may be briefly enumerated. The rigid perineal part is so curved as to exert constant digging pressure against the fundament, and to severely prod the wearer while sitting, for the relief of which an alteration in the curve is demanded. The junction of the rubber-tube with the vulcanite presents a jagged surface which soon abrades the nates, compelling the patient to wear a pad or wrap the instrument at this point. Then again the rubber-tube is unnecessarily heavy and unyielding ; consequently, undue traction is made upon the perineum, causing the vulcanite to cut into the delicate sensitive membrane at the orifice, to obviate which a lighter elastic has to be substituted. Finally the vaginal portion is straight, or with a slight downward deflexion at its middle third ; therefore when worn it straightens the normal incursion of the tissues either by depressing the vaginal prominence or tilting upward the structures at its distal end ; hence the requisite alterations must be made before the loop will lie flat on the vaginal floor. In short, this instrument, as received from the shop, has to be modified throughout before it is fitted to accomplish its possibilities, much of the needed change doubtless being due to carelessness and want of anatomical knowledge on the part of the maker, rather than through any misconception of the inventor.

Whenever employing this instrument my constant consideration was the abolishing of these annoyances while still retaining the principle. With this end in view I took a loop of copper wire suitably moulded, and with the ends neatly soldered, to a manufacturer of soft rubber implements, who, after several

experiments, succeeded in producing the instrument here illustrated.

The material used in covering is the same as found in red rubber flexible catheters. The sheathing covering the wire and the tube reaching to the waist-band are continuous; the surface, which is unbroken throughout, being smooth and highly polished.

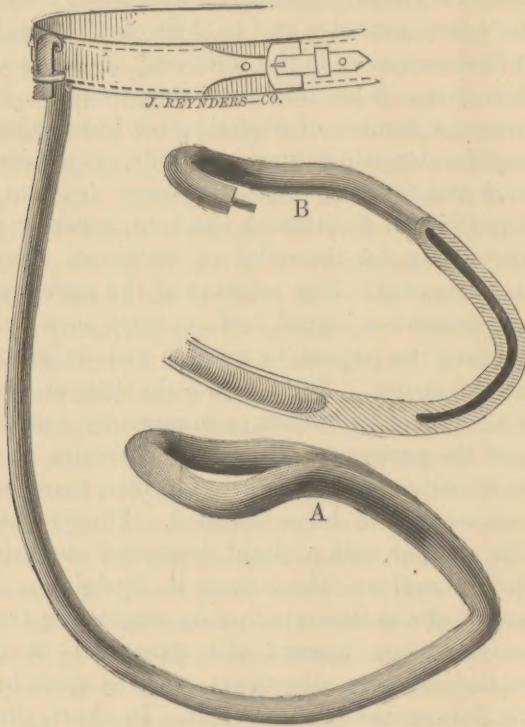


FIG. 1.—A, Illustrated pessary properly moulded to correspond with normal contour of vaginal floor and perineum; B, Section of pessary illustrating its construction.

The perineal portion of the wire is short, and should not be more than three-fourths of an inch in length. At this part the sheathing tapers into the tubal prolongation, which becomes light and very elastic; hence the traction exerted upon the perineum is proportionately slight, a feature fully appreciated by the wearer. Here it may be well to explain that the traction made by the tube while in use should be barely sufficient to retain the pessary within the vagina; the requisite tension therefore is very

slight indeed. As a matter of course, the success of this instrument depends largely upon proper selection, correct adjustment, and intelligent management. In the first place, I protest against this or any form of pessary except when necessity absolutely demands it. Their action should ever be held subordinate to other more philosophical and natural remedial means such as postural treatment, the application of medicated tampons, the correction of faulty habits, well-regulated physical exercise, etc. Because there is detected a deviation from normal position, it by no means follows that a pessary is admissible. Dislocation of the uterus may exist without giving rise to the slightest discomfort, and to insist upon disturbing such quiescent organs would, in all probability, to say the least, be thrusting needless suffering upon the individual. On the other hand, it is among the commonest occurrences to find pelvic dislocations complicated with inflammation, or some of its products, to such an extent that the use of the best devised pessary is prohibited. Any one having had frequent occasion to see and handle the pelvic structures from above, and able to speak authoritatively from practical study of the pathological anatomy of these textures, will be very loth to permit the wearing of any form of mechanical device within the genital canal, while there exists undue tenderness or other evidence of acute disturbance. It is obligatory upon every physician assuming the practice of gynecology in any degree, to improve all opportunities for acquainting himself, by autopsies, with the nature and extent of textural change which takes place in and around the uterus and its annexes when once seriously invaded by inflammation. Any one who has ever seen to what extent these organs can become agglutinated through lymph deposit, has felt the dense, puckered, resistant cicatricial tissue, lying in the angle of some long-standing distortion, or has looked upon a dislodged adherent cystic ovary, or a convoluted Fallopian tube distended to the verge of bursting—when he is familiar with all this through personal inspection, grave surprise will be awakened that the fool-hardy practice of forcibly breaking up of old adhesions, and other mischievous and futile manipulations have ever been indorsed. It is impossible for the mind to conceive to what extent the sufferings of women have been augmented through misconception of the nature, and consequent ill-advised methods, in the

treatment of pelvic disorders; nor need we be reminded how largely misapprehension regarding the action and true merits of pessaries has contributed to this wrong. Revert to the normal anatomy of the uterus and vagina, their relative positions to each other, and their environment, and then reflect upon the impracticability of those principles upon which are founded the "stem and cup" devices, or the so-styled "elevators," or even the long-accepted theory of "leverage action."

It is needless to say I do not undervalue correct and conservative usage of mechanical aids, but would emphasize the fact that their true province is widely perverted, and the legitimate sphere of their utility extremely limited compared with their present extensive employment. The stringent test of all measures is the ultimate effect which time discloses, and we know full well that the hope awakened by the sense of security and temporary relief afforded by a well-adjusted mechanical support is not only delusive, but too often the prelude to more serious local complications. It is a very common experience to deal with cases that were primarily amenable to simple treatment, but which have been merged into incurables through the protracted wearing of artificial supports, which abuse was permitted simply because their presence gave no marked inconvenience. It is therefore incumbent upon every physician to weigh well the subject in all its bearings before employing an instrument which is by nature a self-perpetuating evil, for it may justly be said of pessaries, "once in use always in use." It were far better that they be expunged from the list of remedial agents, unless their application be guarded by proper restraints, and their true province most fully and intelligently comprehended. The enumeration in detail of indications for and against the use of pessaries would far exceed the scope of this paper, but I cannot refrain from reiterating that it should always plainly be understood that cases of pelvic anomalies must first be relieved from all inflammation and its concomitants, also that there must be entire freedom from adhesions before mechanical treatment is entered upon. I would also refer to the reprehensible tendency which prevails toward the employment of pessaries unnecessarily large. Where one of two and a half or three inches is suitable, owing to the distensibility of the vagina, another of four or more inches

in length can easily be inserted, but to the harm of eth patient. The injury wrought is not always commensurate with the discomfort excited by the pressure, for this may be relatively slight, but it can be readily understood that prolonged pressure exerted upon highly vascular tissues must necessarily obstruct the circulation of the parts, hence atrophy, plastic exudation, ulcerations, increased atony, etc. Again, that misleading term, "uterine support," unquestionably does much toward creating misapprehension of the proper action of pessaries, for their true province is not the elevation of the uterus, but the restoration of the vagina to its normal position and shape.

To present this fact more fully, let us refer to the natural position and vaginal relation of the uteruses. This organ we find reclining beneath the dome of the sacrum, which shelters it from visceral weights and diaphragmatic impulses. It looks downward and backward into the hollow of the pelvis in the direction of the coccyx, and consequently from rather than toward the vaginal canal. This being its relation, we see how impossible it would be to so adjust any of the so-styled "uterine supports" ("stem and cup"), as to lift the uterus and at the same time position it correctly.

Vaginal prolapse always precedes retrodeviation and falling of the uterus, and as the cervix is dragged forward by the crumpling or shortening of the vaginal walls, in this way allowing the fundus to fall backward, it is a most logical inference that the replacement of vaginal textures must also include the readjustment of the dislodged cervix, and, as its home is within one or one and a half inches of the sacrum, its restoration compels the fundus to fall forward and reoccupy its proper place. Moreover, the well-being of the uterus demands that its movements be as multiplex and absolutely untrammelled as the oscillations of a buoy anchored in the tide. To this end nature has floated it on an undulating mass, the whole resting upon a substratum of remarkable elasticity, and when from any morbid cause the resiliency of this subuterine tissue is impaired, we know how speedily calamity overtakes the uterus. Viewed in the light of these facts, how ill-advised is the employment of any pessary designed to directly uphold the uterus through leverage, or that in any way impinges upon the cervix. Were

the term "vaginal splint" substituted for "uterine support," the modus operandi of intelligently constructed pessaries would be more fitly expressed, much ill directed labor avoided, and patients spared the needless torture inflicted by the use of well-known devices, the evidence of indifference or lack of anatomical knowledge.

In this place, it is not feasible to dwell more fully upon the etiology of uterine displacements. Textural degeneration within the vaginal walls, and the structures which combine to form the pelvic floor, is ever present as an associate pathological condition and perpetuating factor.

To expect restoration of tone to the enfeebled tissues merely through the action of mechanical means, however skilfully applied, would be a short-sighted policy indeed. As already stated, the prolonged presence of a foreign body within the vagina is not only a source of irritation, and an obstacle in the way of recuperation, but it unquestionably increases the atony. I go a step farther, and believe with reason that were a pessary inserted, and retained within a normal vagina for a few consecutive weeks, its removal would be followed by some degree of prolapsus. The term "prolapsus uteri" is employed from usage, but scientifically it would be more correct to designate the condition as "vaginal hernia," the uterus forming but an insignificant part of all that which descends. The falling en masse of the mobile pelvic structures is induced by any process which impairs the pelvic floor, or that directly atrophies or depreciates the tone of the pelvic fascia and textures surrounding the vaginal slit, just as surely as a similar weakening of the textures guarding the inguinal canal favors the descent of the intestine therein. The local enervation, however, following the protracted wearing of pessaries is not altogether due to mechanical action. Supplanting the normal function of any organ of the body by artificial substitutes induces atrophy, and the tissue degeneration incurred by the use of pessaries is an exemplification of this. In the process of restoration, the only part a pessary can possibly play is simply the correction of the distortion, which interferes with normal nutrition by obstructing free circulation. As the virtue of a pessary ceases when not overcoming gravitational influences, it should be removed during recumbency and worn only when

the upright position is assumed, and even then should not be resorted to unless its aid be demanded by the sensations of the patient.

It is a matter of practical import that the normal vaginal curves be comprehended, and respected in the adjustment of mechanical appliances. The fact that the vagina is highly elastic and pliant, affords no adequate excuse for the employment of a pessary that distends or distorts its tissues. It is surprising how widely prevalent is the misapprehension concerning this matter. Give a pliant, correctly moulded pessary



FIG. 2.—Schematic view of pelvic floor and adjacent structures reduced one-half from life size. 1, Recto-coccygeal segment; 2, perineal body; 3, vaginal prominence; 4, os pubis; 5, vaginal orifice; 6, urethra; 7, cervix uteri; 8, bladder; 9, anus; 10, coccyx; 11-12, labia; 13, retropubic fat; 14, nates.

into the hands of the general practitioner, and the probability is he will immediately proceed to re-shape it to correspond with his preconceived ideas, which as a rule are greatly perverted. This common misconception is undoubtedly the result of faulty early training, and misleading text-book illustrations. To more forcibly present these views a diagram is here produced, representing a schematic view of the parts involved. It will be seen that instead of the slightly crescentic shape, usually accorded the vagina (its concavity looking forward), there is here delineated an opposite curving of the vaginal floor, the convexity being most prominent along its middle

third; nor is this upward bulging due to the perineal body, as some authors have recently maintained, but to the advancing upward of the recto-coccygeal segment, which body constitutes the grand supporting buttress of the pelvic contents. Any one questioning this portraiture can prove its truthfulness by physical exploration; the woman should be standing firmly, as the horizontal posture relaxes the tissues. Having traced the vaginal floor, and noted its power of resistance, retract the nether structures with a tractor placed in the rectum, and it will be demonstrated that with the depression of this part the vaginal floor straightens and becomes flaccid, and this occurs independent of any lesion of the perineum. Having touched upon the subject of the perineum, it may be proper to briefly refer to some of its physiological features directly bearing upon our subject. In the first place, its importance as a direct, active, supporting factor has been greatly overrated. That it does not constitute a sustaining buttress or "key stone" within the pelvic floor is shown by the fact of its complete destruction affecting the location of the superstructures far less than simple atrophy or partial destruction. The first condition precludes the possibility of rectal impaction and consequent expulsive efforts, while the second favors habitual constipation and the formation of rectocele, which anomaly inevitably drags the uterus downward. Again, a traumatic lesion is by no means an essential prerequisite in the disablement of the perineum, for it is well known that extreme textural attenuation and exaggerated forms of rectocele are found in women who have never been pregnant. As a rule, these instances afford apt illustrations of atrophy induced by mechanical pressure, the causative factors being either habitual impaction of the rectal ampulla with hardened feces, or the prolonged wearing of foreign bodies within the vagina, by which the integrity of the perineum may be completely destroyed. A sensation of weight, fulness, and lack of strength usually pervades the pelvic region when the tone of the perineum is seriously depreciated, but this does not prove that this segment directly upholds the superstructures. In analyzing the anatomical and histological elements of the perineum, we will find that it constitutes a movable point of fixation for levator muscles and fascia, which here converge and form an intermediary attach-

ment, hence a lesion or any other influence which destroys the tensile strength of the perineal body permits the levators and pelvic fascia to fall away from this seat of fastening, and the relaxation which thus ensues depreciates the condition of the entire pelvic viscera, as impairment of fascial tenseness always permits passive engorgement, and otherwise deranges involved textures. Therefore, it goes without saying that the tangible local defect represents but a minor part of the mischief wrought. The direct or corporeal support contributed by the perineum is passive and by virtue of position. To be more explicit—regarded *substantially* the perineal structures constitute a cushiony wedge for the filling in of the recto-pubic triangle, thereby enabling the actively supporting tissues to extend their function to parts otherwise beyond their immediate influence. In other words, the bilateral levator ani, reaching back from the os pubis to reunite in the mass behind the rectum, embraces the urethral, vaginal, perineal and rectal tissues; hence as this muscle lifts the pelvic floor, the perineal body affords pressure and counter pressure upon adjacent textures.

Of the anatomical arrangement of the pelvic floor, a careful study shows indubitably that the *chief* centre of active support is *behind* the rectum, where the aponeuroses of the levator muscles converge, and are fused together by a large accession of elastic connective tissue, the whole forming a body at once highly elastic and resistant, upon whose healthful development and resiliency depends in a great measure the normal poise of the pelvic contents.

It is a significant fact, and one easily confirmed by observation, that there always exists a co-ordinate integrity between the pelvic organs and the textures uniting to form the recto-coccygeal body. Let the varying degree of arcuation of the pelvic floor be noted in a given number of cases, and it will be shown that an exaggerated downward bulging or lengthening of the pubo-coccygeal line together with textural atony, invariably coexist with prolapsus of the superstructures. A moment's reflection will reveal the *rationale* of this co-ordination. As the orifices of the included canals drop downward and backward, recto-vaginal incurvity is decreased, and in proportion to the lengthening of the pubo-coccygeal line, these apertures are dragged upon and rendered patulous. The descensus of the

vagina incurs the tilting backward of the uterus, and as the axes of these two organs become parallel, the uterus sinks into the vaginal track. Naturally the bladder gravitates as the perineum recedes.

The validity of the above assumptions being established, it follows that any influence impairing the textural tonicity of the pelvic floor, or that straightens the vaginal incurvation, is favorable to prolapse. The predisposing causes may be inherent delicacy of muscular tissue, lack of exercise, habitual constipation, and consequent straining at stool (a very fruitful source), misfortunes of parturition, or, what is more pertinent in the present consideration, the employment of bulky or improperly curved pessaries, the presence of which destroys the normal outlines of the vaginal floor, and induces textural atrophy.

An appreciation of this principle is indispensable to the correct adjustment of all pessaries. A moderately curved Hodge-Smith pessary, if not too long, will adjust itself to the upper curvature of the vagina; but if unnecessarily long and straight in the middle portion, with an upward sweep of the distal end, it must encroach upon and damage the textures, and should the floor of the vagina be moderately firm, the familiar lesion of burrowing is liable to occur. Even when the mischief wrought is not tangible, the hidden injury is always present and not unfrequently severe, especially so when the pessary is made to crowd high up behind the cervix. This exaggerated upward curve is erroneously supposed to be conducive to a better repositioning of retroflexions, which assumption is not sustained by anatomical knowledge, normal or pathological, for the end of the instrument cannot possibly be made to reach higher than the cervico-uterine juncture; and, as this is the seat of diseased texture, pressure thereon must necessarily aggravate the morbid condition, which is apt to result in abiding distortion.

Owing to the pliancy of the canal, an intravaginal pessary is, in a degree, self-adapting; but it is necessary to be more anatomically accurate when adjusting a pessary measuring the entire vaginal floor.

In the arrangement of this instrument it should be so bent that its under-concavity may saddle upon the vaginal prominence; and, as its office is simply the carrying of the cervix

backward to its proper site in the sacral cavity, no decided or exaggerated upward turn of the distal extremity is required. The *fenestra* should be sufficiently wide to encircle the *cervix* loosely. After proper adjustment, the patient must be instructed in the insertion and removal. When the loop has entered the orifice, the distal end should be made to traverse the floor of the *vagina* by directing it toward the point of the *coccyx*. Teach the wearer that the *vagina* is more horizontal than upright, and she will be less liable to engage the loop in front of the *cervix*. To insure the passage of the loop over the cer-

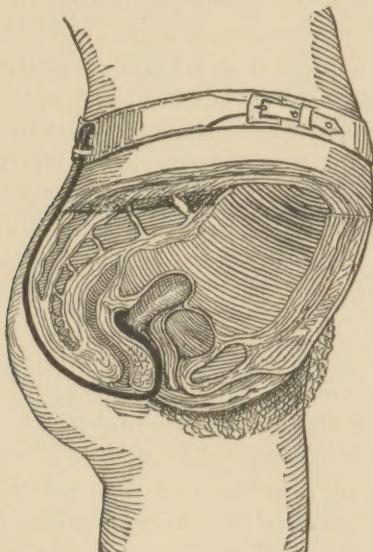


FIG. 3.—Illustrating pessary adjusted.

vix, it is prudent to crowd the *perineal end up and behind the pubic arch*. Finally place the instrument squarely upon the vaginal floor and attach the tube to the belt which has previously encircled the loins just below the crests. The wearer should be accorded full liberty in the regulation of the tension, which should never be so severe as to become irksome, and after the first successful efforts she becomes quite expert in its management.

During the first few weeks of usage it may be necessary that the instrument be worn continuously while the erect posture is maintained, but as soon as practicable it should be discontin-

ued a part of the day, the periods of disuse gradually increasing. It is only through faithful compliance with these rational principles, combined with well directed physical exercise, avoidance of straining at stool, correct corporeal posturing in standing, sitting, and lying, and the wise observance of other hygienic laws, that we can reasonably hope to restore the textural tone and train the parts to resume their functions as mechanical aid is gradually withdrawn altogether. It will probably be asserted by many that these conditions can be equally well fulfilled while using a properly moulded Hodge-Smith pessary, and the seeming sound logic of the argument is conceded; the assumption, however, has not been sustained by personal experience, for I have repeatedly employed the intravaginal pessary, following the same rules regarding adjustment, insertion, and removal, as applied to the Cutter loop instrument; but, for some reason, these efforts have proved relatively unsuccessful. It is probable that the readiness with which this instrument yields before downward impulses, combined with its gently elastic recoil, contributes to the success, for possibly this resilient play stimulates the enfeebled contractile tissues to increased action, and in this way tensile strength may be developed, and the parts trained to a better fulfilment of functions.

Many object to the use of soft rubber on the grounds of uncleanliness and bad odor, but when we consider that the instrument is to be removed and cleansed as often as once in twenty-four hours, the first objection is disposed of; and the peculiar odor can be entirely prevented by lubrication with an emulsion of castile soap and salicylic acid. We should mention that the quality of the rubber used in the manufacturing is the chief essential, which fact was unpleasantly demonstrated by the first few lots proving worthless, inasmuch as they soon lost their vitality, and broke. In view of this most important feature, it may here be stated that the firm of John Reynders & Co. has taken especial care to comply with the requirements. When properly made, they are quite durable, some now in my possession being apparently as sound as when produced nearly three years ago.



